

PRODUCT DATASHEET

LED TUBE T8 EM CHIP CONTROL 1500 mm 23W

LED TUBE T8 EM CHIP CONTROL | High performance LED tubes for electromagnetic control gear (CCG) and AC mains, with UV filter sleeve



Areas of application

- Micro chip and semiconductor production
- Applications where UV and blue light percentage have to be reduced to a minimum
- Industry

Product benefits

- Excellent UV filter
- Very high resistance to switching loads
- Quick, simple and safe replacement without rewiring
- Energy savings of up to 62 % (compared to T8 fluorescent lamp)
- Instant-on light, therefore ideally suitable in combination with sensor technology
- Also suitable for operation at low temperatures

Product features

- LED replacement for classic T8 fluorescent lamps with G13 socket for use in CCG luminaires or on AC mains
- Excellent filter performance below 500 nm
- Low flicker according to EU 2019-2020 ($SVM \leq 0.4$ / $PstLM \leq 1$)
- ENEC 10 VDE mark



- Lifetime up to 50,000 h
- Type of protection: IP20
- Mercury-free and RoHS compliant

TECHNICAL DATA**Electrical data**

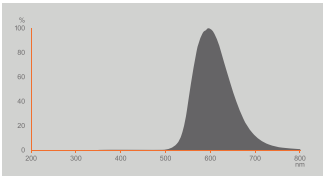
| | |
|--|------------------------|
| Nominal wattage | 23 W |
| Construction wattage | 23.00 W |
| Nominal voltage | 220...240 V |
| Operating mode | CCG, AC Mains |
| Nominal current | 108 mA |
| Type of current | AC |
| Inrush current | 8.48 A |
| Suitable for DC input | Yes |
| Input voltage DC | 186...260 V |
| Operating frequency | 50/60 Hz |
| Mains frequency | 50/60 Hz ¹⁾ |
| Max. lamp number on MCB B10 A | 4 |
| Max. lamp number on MCB B10 A - CCG without compensation | 43 |
| Max. lamp number on MCB B10 A - CCG with compensation | 3 |
| Max. lamp number on MCB B16 A | 7 |
| Max. lamp number on MCB B16 A - CCG without compensation | 68 |
| Max. lamp number on MCB B16 A - CCG with compensation | 5 |
| Total harmonic distortion | 6 % |
| Power factor λ | 0.90 |

¹⁾ DC 0Hz

Photometrical data

| | |
|---|---------------------|
| Luminous flux | 2500 lm |
| Luminous efficacy | 108 lm/W |
| Lumen main.fact.at end of nom.life time | 0.96 |
| Light color (designation) | Yellow |
| Color temperature | 2000 K |
| Color rendering index Ra | 35 |
| Light color | 320 |
| Standard deviation of color matching | ≤5 sdc _m |
| Rated LLMF at 6,000 h | 0.80 |
| Flickering metric (Pst LM) | 1 |

| | |
|---------------------------------|-----|
| Stroboscope effect metric (SVM) | 0.4 |
|---------------------------------|-----|



Spectral graph LEDTUBE T8 CHIP

Light technical data

| | |
|---------------------|----------|
| Beam angle | 190 ° |
| Warm-up time (60 %) | < 0.50 s |
| Starting time | < 0.5 s |

Dimensions & Weight



| | |
|---|------------|
| Overall length | 1513.00 mm |
| Length with base excl. base pins/connection | 1500.00 mm |
| Diameter | 26.70 mm |
| Product weight | 320.00 g |

Temperatures & operating conditions

| | |
|--------------------------------------|----------------------------|
| Ambient temperature range | -20...+45 °C ¹⁾ |
| Maximum temperature at tc test point | 65 °C |

1) Temperature surrounding the lamp - for enclosed luminaires: temperature inside of the luminaire

Lifespan

| | |
|--|---------|
| Lifespan L70/B50 at 25 °C | 50000 h |
| Number of switching cycles | 200000 |
| Lumen maintenance at end of service lifetime | 0.96 |
| Rated lamp survival factor at 6,000 h | ≥ 0.90 |

Additional product data

| | |
|-----------------------------|--------|
| Base (standard designation) | G13 |
| Mercury content | 0.0 mg |
| Mercury-free | Yes |

Capabilities

| | |
|----------|----|
| Dimmable | No |
|----------|----|

Certificates & Standards

| | |
|--|------------------------------|
| Energy consumption | 23.00 kWh/1000h |
| Type of protection | IP20 |
| Standards | CE / UKCA / VDE / ENEC / EAC |
| Photobiological safety group acc. to EN62778 | RG0 |

Country-specific categorizations

| | |
|-----------------|-----------------|
| Order reference | LEDTUBE T8 EM C |
|-----------------|-----------------|

LOGISTICAL DATA

| | |
|------------------------------|--------------|
| Temperature range at storage | -20...+80 °C |
|------------------------------|--------------|

Energy labelling regulation data acc EU 2019/2015

| | |
|---|------------|
| Lighting technology used | LED |
| Non-directional or directional | NDLS |
| Mains or non-mains | MLS |
| Light source cap-type (or other electric interface) | G13 |
| Connected light source (CLS) | No |
| Color-tuneable light source | No |
| Envelope | No |
| High luminance light source | No |
| Anti-glare shield | No |
| Standby power | 0 W |
| Claim of equivalent power | No |
| Length | 1513.00 mm |
| Height | 26.70 mm |
| Width | 26.70 mm |
| Chromaticity coordinate y | 0.4482 |
| R9 Colour rendering index | 0.00 |

| | |
|--|------------|
| Beam angle correspondence | SPHERE_360 |
| Survival factor | 0.9 |
| Displacement factor | 0.9 |
| LED light source replaces a fluorescent light source | No |






EQUIPMENT / ACCESSORIES






- Replacement starter for LED tubes


Safety advice

- Not suitable for operation with electronic control gear.
- Operation in outdoor applications in suitable damp-proof luminaires possible according to data sheet and installation instruction.
- Not suitable for emergency lighting.
- Disconnect mains before installation.

DOWNLOAD DATA

| Documents and certificates | | Document name |
|--|--|------------------------------------|
|  | User instruction / safety instructions | LEDTUBE T8 EM CHIP S |
|  | On-Pack-Info | ELR - exempt lamps |
|  | Legal information | Informationstext 18 Abs 4 ElektroG |
|  | Declarations of conformity | LED tube |
|  | Declarations of conformity UKCA | LED tube |

| Photometric and lighting design files | | Document name |
|--|-------------------------------------|--------------------------------|
|  | IES file (IES) | LEDTUBE T8 EM CHIP S 23W 1500 |
|  | LDT file (Eulumdat) | LEDTUBE T8 EM CHIP S 23W 1500 |
|  | UGR file (UGR table) | LEDTUBE T8 EM CHIP S 23W 1500 |
|  | Light distribution curve type polar | LEDTUBE T8 EM CHIP S 23W 1500 |
|  | Spectral power distribution | Spectral graph LEDTUBE T8 CHIP |

| Tender texts | | Document name |
|--|------------------|--|
|  | Tender documents | LED TUBE T8 EM CHIP CONTROL S 1500 mm 23W-EN |

LOGISTICAL DATA

| Product code | Packaging unit (Pieces/Unit) | Dimensions (length x width x height) | Gross weight | Volume |
|---------------|------------------------------|--------------------------------------|--------------|-----------------------|
| 4099854271496 | Sleeve 1 | 1,555 mm x 29 mm x 29 mm | 354.00 g | 1.31 dm ³ |
| 4099854271502 | Shipping box 10 | 1,590 mm x 170 mm x 95 mm | 4291.00 g | 25.68 dm ³ |

The mentioned product code describes the smallest quantity unit which can be ordered. One shipping unit can contain one or more single products. When placing an order, for the quantity please enter single or multiples of a shipping unit.

References / Links

– For current information see www.ledvance.com/ledtube

Legal advice

– When used to replace a T8 fluorescent lamp the total energy efficiency and light distribution depends on the design of the lighting system.

DISCLAIMER

Subject to change without notice. Errors and omission excepted. Always make sure to use the most recent release.